ABSTRACT

The present invention relates to a BDPD-based method for improving efficiency of RF power amplifier, comprising: first, choose key neural network architecture and scale and input initial values of modeling data and network parameters necessary for establishing the neural network model for RF power amplifier; second, correct network parameters with back propagation method and output the neural network model for RF power amplifier when the error meets the criterion; next, solve the pre-distortion algorithm of the RF power amplifier with said model and then carry out pre-distortion processing for the input with the pre-distortion algorithm and feed the input to the RF power amplifier. The present invention can be used to establish a neural network model with adequate accuracy and easy to solve corresponding pre-distortion algorithm for RF power amplifier, in order to improve RF power amplifier efficiency, reduce costs, and suppress out-of-band spectrum leakage effectively through base-band digital pre-distortion technology.